Horticultural Food Waste in Scotland

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**Key Message:** This briefing outlines measures that could provide positive change to ensure that more food from Scottish fruit and vegetable farms will make its way along the food supply chain as intended, from ‘farm to fork’, without being wasted.

**Main Findings**

- Through in-depth interviews, this research examines the views of farmers about food waste in primary production occurring on Scottish soft fruit and vegetable farms\textsuperscript{5}.
- Farmers do not identify food waste as an issue of primary concern. It is perceived to be an intrinsic part of agriculture.
- The farmers that were interviewed do not routinely record waste and many have difficulty in estimating food losses on their farm. Levels of waste are estimated to be 20-50 percent for vegetables and 1-15 percent for soft fruit.
- The root causes of food waste and losses on farm as identified by farmers include pests and diseases, weather, storage, harvest, cosmetic specifications, and supply and demand.
- The destinations for food waste on farms include food redistribution, animal feed, anaerobic digestion, composting and ploughing back into the soil.
- Shared understanding is needed when defining food waste in primary production. Any approach to reduce food waste on farms needs to be phrased and framed in a context that is relevant to farmers, for example, in terms of economic losses.
- There is need for an official recording of food waste statistics in Scottish agriculture. For future initiatives on food waste in primary production, it is crucial that the boundaries of the food supply chain are clearly defined at a national level and that, where farmers are asked to provide data, there is clarity around definitions used.
- Improving relations between farmers and retailers will be crucial to reduce on-farm losses of edible produce. Future policy measures to address food waste should facilitate co-operation between these two groups.

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\textsuperscript{5} For full details of the research see: Beausang, C., Hall, C. & Toma, T., 2017. Food waste and losses in primary production: Qualitative insights from horticulture. Resources, Conservation & Recycling, 126, 177-185
Introduction

Food waste is recognised as being one of the major global challenges in achieving a sustainable future. Currently very little is known about how much food is wasted on farms. The Scottish Government published its Circular Economy Strategy ‘Making Things Last’ in February 2016. This includes the target to reduce all food waste arising in Scotland by 33 percent by 2025 and stresses the importance of working “with industry to reduce on-farm losses of edible produce”.

Methods

A qualitative approach was used to gain a better understanding of food waste and losses in Scottish horticulture. Twelve farmers were interviewed during June 2016. Interviews took place in the Scottish Borders, Aberdeenshire, Renfrewshire and Fife. The interviewees were a mix of fruit growers and vegetable growers and represented a spread of farm size from 4 to 3500 hectares.

Research Implications

- Farmers claimed that waste arises as consumer tastes and demand change over time. The potential for waste reduction through research into (i) changing population and product preferences and (ii) new product development to utilise excess yield could be examined.

- Further research is recommended to examine the extent to which relationships between farmers and retailers have changed in Scotland, and how this influences levels of food waste in primary production.

- A quantitative study which examines food waste and losses over several years could be used to estimate food waste on farms in Scotland. Alternatively, this could become a requirement of annual reporting of farm statistics.

Policy Implications

- Cosmetic specification is a persistent issue for farmers that leads to edible produce being graded out on farm. Consideration could be given to relaxing cosmetic standards further and promoting greater consumer awareness of the relationship between product appearance and quality. For example, emphasising that imperfect shape does not necessarily equate to a poor quality or inferior product.

- Weather conditions can significantly influence levels of production and hence food waste in Scotland. Retail promotions could be arranged around the availability of produce and hence tie in with gluts and surpluses. Where this is not possible, greater efforts could be made to redistribute surplus produce to food charities through ‘gleaning’

- The farmers stated that limited processing facilities in Scotland contribute to food waste in primary production. Investing in processing and freezing facilities in Scotland could be a valuable way to further reduce food waste along the food supply chain.

- Many farmers expressed an interest in using anaerobic digestion to extract value from waste but identified several barriers that prevented them from doing so. For vegetable farmers, having a consistent supply and the right mix of matter for digestion were major concerns. The issue of transporting waste to an off-site anaerobic digestion plant was also a concern for farmers. The potential of local biorefining hubs should be examined to extract the maximum value from unavoidable food waste.

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\[\text{\footnotesize\(^2\) ‘Gleaning’ refers to the practice of collecting crops in the field and redistributing them for human consumption which are otherwise sent for animal feed, anaerobic digestion, or to landfill (Fusions, 2015).}\]